

REMARKS

Applicants have received and reviewed an Office Action dated March 26, 2001. By way of response, Applicants have amended claims 1, 9, 10, 16, 17, 19, 20, 26-28, 30, 32, 46, 50, and 51. No new matter is presented by the amendment to the claims. Applicant submits the amended claims are supported by the specification.

For the reasons given below, Applicants submit the amended claims are in condition for allowance and notification to that effect is earnestly solicited.

Petition for Extension of Time

It is noted that a two-month petition for extension of time is necessary to provide for timeliness of the response. A request for such an extension is made extending the time for response from June 26, 2001 to August 26, 2001.

Rejection of Claims Under Section 112, Second Paragraph

The Examiner rejected claims 1-51 under 35 U.S.C. § 112, second paragraph. The Examiner objected to certain terms and phrases employed in the claims. Applicants respectfully traverse this rejection in part. Applicants have amended certain claims to address certain portions of this rejection.

Applicants have corrected, in claim 1, "an" to read "a" as suggested by the Examiner.

The Office Action objected to the recitation in claim 1 of "per each part of dye". Applicants respectfully assert that the phrase objected to by the Office Action clearly relates back to the "parts by weight" recited earlier in the same subparagraph of the claim.

The Office Action objected to the recitation in claim 1 of "the dye". Applicants respectfully assert that the phrase objected to by the Office Action properly takes antecedent basis from the immediately preceding recitation of "a dye" in the same subparagraph. This recitation also provides antecedent basis for at the same phrase in claims 2 and 7.

The Office Action objected to the recitation of the term "ware" in claims 8 and 30. First, Applicants respectfully point out that the term "ware" is a well-established term of art commonly used to refer to items found in the institutional or commercial kitchen or restaurant. Second, the term "ware" is defined in the specification at page 8, lines 17-19, as indicating "dishware, pots and pans, flatware, glassware, metallic and plastic utensils, and other tools and containers

common in the institutional or commercial kitchen or restaurant environments". Third, "A Handbook of Industry Terms" published by the Soap and Detergent Association defines the related term "warewashing" as washing of dishes, utensils, glassware, pots and pans, etc. in the institutional area, such as restaurants, hotels, motels, hospitals, schools, nursing homes, and governmental facilities (Exhibit A). Therefore, the term "ware" is well defined. ✓

Applicants have, as suggested by the Examiner, added an amount of source of halogen to claim 1.

Amended claim 9 includes proper antecedent basis for all phrases. Applicants believe that it is clear that the weight percentage recited in subparagraph (a) refers to the particulate composition. Applicants have removed the phrase "is has" as suggested by the Examiner.

The Office Action asserts that claims 9, 19, and 30 do not provide sufficient antecedent basis for recitation of "the indicator" in independent claims. Claims 9 and 19 each recite "a dye that indicates". Claim 9 also recites "halogen indicating amount of dye". Claim 30 recites "a halogen indicating dye". Applicants respectfully submit that these references in the independent claims to indicating dyes or to dye that indicates provides sufficient antecedent basis for recitation of "the indicator" in dependent claims. X

Applicants respectfully submit that the recitation in claim 42 of "major portion" is well defined. A major portion is a portion that is "notable or conspicuous in effect or scope" as defined by Miriam Webster's Collegiate Dictionary (Exhibit B).

In claim 42, the percent by weight are for ingredients in the powdered solid and thus refer to the powdered solid.

The Office Action asserts that claim 44 is confusing. Applicants respectfully disagree. Claim 44 relates to an encapsulated chlorine source. The encapsulated chlorine source includes a particle of chlorine source and two layers, an inorganic layer and an organic layer. Applicants respectfully assert that claim 44 clearly recites the components of an encapsulated chlorine source. 20

Applicants have amended claim 51 to properly employ "or" as a connector in a Markush group.

Accordingly, it is respectfully submitted that the pending claims fully comply with § 112, second paragraph, and withdrawal of this rejection is respectfully requested.

Prior Art Rejections

The Examiner rejected claims 1-51 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Gladfelter et al. The Examiner rejected claims 9-29, 50, and 51 under 35 U.S.C. § 103(a) as obvious over Great Britain Patent No. 1,041,593. Applicants respectfully traverse these rejections.

The present invention relates to cleaning compositions including a dye that indicates the presence of an effective concentration of a halogen sanitizer. Loss or change in color of the dye indicates that the concentration of halogen has been reduced significantly and that additional sanitizer may be required.

In contrast, the Gladfelter et al. reference relates to cleaning compositions including dyes that "are stable against degradation in the presence of strong chlorine releasing agents." (Gladfelter et al. at column 11, lines 32-35). The dyes disclosed by Gladfelter et al. would not lose or change their color in the presence of an effective concentration of a halogen sanitizer. Therefore, these dyes could not indicate a reduction in the amount of halogen sanitizer.

The dyes disclosed in the Great Britain patent also serve an entirely different purpose and have different characteristics than the dyes employed in the present compositions. The Great Britain patent employs dyes to "give a visual indication of the initiation of germicidal activity" (emphasis added) (page 3, lines 108-110). That is, the color change occurs at the beginning of use of the composition, not after the chlorine has been consumed. In fact, one of the preferred dyes according to the Great Britain patent goes from "green to water-white within about 15 seconds after" the composition "is dissolved in water to form a diluted aqueous solution." (Page 3, lines 121-127). This short time period is consistent with indicating the initiation of germicidal activity, and inconsistent with indicating the continued presence of halogen sanitizer.

The amended claims clearly distinguish the present compositions from the disclosure of the references cited in the prior art rejections. Each of the independent claims recites that the dye indicates the presence of active halogen (or reacts with active halogen) and that the dye indicates the presence of active halogen for from 15 minutes to 24 hours or, in claim 30, until after greater than 90% of the oxidizing species have been consumed. Therefore, the references cited in these prior art rejections neither disclose nor suggest the presently claimed compositions and methods.

Accordingly, based on the foregoing differences, is respectfully submitted that the references cited in these prior art rejections neither teach nor suggest the presently claimed compositions are methods, and withdrawal of this rejection is respectfully requested.

Summary

In summary, Applicants submit that each of claims 1-51 are in condition for allowance.

The Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below, if the Examiner believes that doing so will expedite prosecution of this application.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) An active [chlorine] halogen containing solid unit containing a [chlorine] halogen source and a [n stable] source of dye, the solid unit comprising:

(a) about 1 to 90 wt% of a source of halogen; and about 10 to about 200 parts by weight of [a solid active] the source of [chlorine] halogen per each part of dye; and

(b) a source of a dye, the dye comprising a particulate dye having a minimum particle size of about 200 microns; the dye, when reacted with the active source of halogen, changing or depleting its color over a predetermined time of 15 minutes to 24 hours;

wherein the solid unit comprises a major dimension greater than about 2 millimeters and a weight greater than about 2 grams, the solid unit substantially free of an amount of free water sufficient to act as a reaction medium between the solid [chlorine] halogen source and the dye.

9. (Amended) A particulate composition forming an aqueous solution having an active [chlorine] halogen source and a dye, the [powdered concentrate] particulate composition comprising:

(a) about 1 to 90 wt% of an encapsulated source of halogen; and

(b) an effective halogen indicating amount of dye;

wherein the concentrate [is] has substantially no free water, has an extended shelf life of greater than one month and when added to an aqueous diluent provides a dye that indicates the presence of an active halogen concentration for a predetermined time of 15 minutes to 24 hours.

10. (Amended) The composition of claim 9, wherein the encapsulated source of halogen comprises a source of chlorine.

16. (Amended) The composition of claim [9] 12, wherein the acid [salt] comprises sodium dihydrogen phosphate, sodium hydrogen tartrate, sodium hydrogen sulfate, or mixtures thereof.

17. (Amended) The composition of claim 9, further comprising a builder, wherein the builder [salt] comprises sodium sulfate, sodium carbonate, trisodium phosphate, sodium bicarbonate, or mixtures thereof.

19. (Amended) An aqueous liquid cleaning or sanitizing composition containing a dye that indicates [chlorine] halogen concentration, the liquid comprising a major proportion of an aqueous diluent, and

(a) a source of acid;

(b) an effective amount of a dye to obtain a colored solution for a predetermined period of time of 15 minutes to 24 hours;

(c) an effective cleaning or sanitizing amount of a halogen bleach;

wherein the aqueous [solution] composition has a pH less than 7 and the dye color is depleted or changed before the concentration of halogen is depleted to less than 50 ppm from the [solution] composition.

20. (Amended) The [concentrate] composition of claim 19, wherein the [source of] halogen bleach comprises a source of chlorine.

26. (Amended) The composition of claim 19, wherein the acid [salt] comprises sodium dihydrogen phosphate, sodium hydrogen tartrate, sodium hydrogen sulfate, or mixtures thereof.

27. (Amended) The composition of claim [19] 22, wherein the builder salt comprises sodium sulfate, sodium carbonate, trisodium phosphate, sodium bicarbonate or mixtures thereof.

28. (Amended) The composition of claim 19, wherein the [concentration] amount of dye [in the concentrate] is adjusted such that the dye color changes or is depleted during a useful period of time during which the sanitizer solution can be used for its intended purpose.

not
further
limiting

how?

method step

30. (Amended) A method of hand washing ²~~ware~~ in a sink having two or more basins, using a [stable] dye in an aqueous oxidative [chlorine] halogen based cleaner or sanitizer composition, the method comprising:

(a) contacting ware with an aqueous detergent in a first basin to remove soil, producing cleaned ware; and

(b) contacting the cleaned ware in a subsequent basin with an aqueous sanitizer solution comprising an effective amount of a [chlorine] halogen source and a halogen indicating dye, [the sanitizer solution additionally comprising a dye that is] the dye, when reacted with the active source of halogen, changing or depleting its color and being sufficiently stable in the aqueous solution to maintain at least some detectable color in the sanitizing solution after greater than 90% of the oxidizing species have been consumed.

32. (Amended) The method of claim 31, wherein the hypochlorite [sanitizer] comprises sodium hypochlorite.

46. (Amended) The method of claim 42, wherein the acid [salt] comprises potassium dihydrogen phosphate, sodium hydrogen tartrate, or mixtures thereof.

50. (Amended) A sanitizing solution useful in sanitizing a surface, the solution comprising:

(a) a major proportion of an aqueous medium having a pH less than 7;

(b) about 1 to 90 wt% of a source of an encapsulated active [chlorine] halogen source resulting in at least 100 ppm active [chlorine] halogen;

(c) an effective amount of a dye to obtain a colored solution for a predetermined period of time of 15 minutes to 24 hours; and

(d) a solid diluent or extender salt.

51. (Amended) The composition of claim 50, wherein the composition additionally comprises an acid salt [selected from the group consisting of] and the acid salt comprises sodium acid phosphate, sodium acid tartrate, or mixtures thereof.